



HATCH
REGENERIS

The Economic and Social Contribution of
the University of Reading

A Final Report by Hatch Regeneris
6 February 2019

The University of Reading

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www.hatchregeneris.com

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Foreword

It is probably fair to say that every major University in the UK today wishes to have a recent independent assessment of its local impact – both for internal institutional reasons, and for a range of external audiences and purposes.

In a *civic age*, when universities are increasingly expected to act as engaged anchor institutions for their places, we believe that a new type of impact report is needed. The major challenge is to go beyond rather impersonal large numbers and more qualitative individual good practice stories, to a robust baseline and honest assessment that is useful for future planning and management of University engagement with key partners.

We are grateful to the University of Reading for explicitly commissioning us to do this more thoughtful type of exercise, and for their support throughout the process.

We have tried to respond with a new type of impact analysis report—one that augments factual descriptors of current performance, with preliminary diagnostics and suggestions of how these might be developed for institutional, local and regional challenges, and opportunities of the future.

This is reflected in the three products of our exercise—a short high-level infographic, visualisation and executive summary of key messages of current impact; the incisive but fuller narrative of our major findings and their potential implications for the 2020s; and the larger portfolio of topic and evidence-based appendices, which informed those findings.

We are keen to receive feedback on how far we have succeeded in producing a more forward-facing and dynamic iteration of the traditional impact study.

We thank the University of Reading for the opportunity to work with them on this, and for the contributions that many individuals at the University and partners made to the piece of work. The report, findings, suggestions for future consideration, and indeed any errors, however, are entirely our own.

Tim Fanning (Hatch Regeneris)

David Marlow (Third Life Economics)

Executive Summary

- i. The University of Reading is an important anchor institution, making a significant economic, social and cultural contribution to Reading and Thames Valley Berkshire (TVB), as well as other locations in the world.¹ Our report provides a quantitative and qualitative baseline on these contributions, and considers opportunities to enhance them in future using a *leadership, partnership and citizenship* framework.
- ii. Overall, we estimate that the University generates at least **£800 million in Gross Value Added (GVA)² and 11,550 Full Time Equivalent (FTE) jobs** for the UK economy, of which around 55% accrues to Thames Valley Berkshire. To put this into context, this means that:
 - around 1 in every 27 jobs in the whole of Reading and Wokingham can be traced back to the University.
 - this GVA contribution is equivalent to 1.3% of all GVA in the Thames Valley area.
 - for every direct job at the University, a further 2.4 jobs are supported across the UK economy.

Summary Economic Contribution of the University of Reading, 2016/17		
	GVA impact (£m, 2016/17 prices)	Jobs supported (FTEs)
Reading and Wokingham	420	5,800
Thames Valley Berkshire LEP	480	6,450
South East England	640	8,950
UK	800	11,550

Calculations by Hatch Regeneris based on data provided by University of Reading.

- iii. Beyond these quantitative economic measures, The University supports Reading and the Thames Valley by:
 - **Supplying highly skilled graduates:** over 20% of graduates staying locally, and most contribute to the future growth of London and the South East. The University is a major supplier and supporter of CPD for both business and key public services like schools, health and care.
 - **Driving business productivity** through knowledge exchange, particularly for businesses located on the University estate at Whiteknights and the Thames Valley Science Park. 98% of the University's research is internationally-recognised, with 27% ranked world-leading. The University's approach to collaboration and partnership working has driven an increase in income from collaborative research of 22% since 2013/14 (compared to 13% across the sector). Indeed, the University's share of research income from UK industry is now more than double that of the sector as a whole, and almost three times that of all universities in the South East.
- iv. The University has also led and championed several 'game-changers' for the area:
 - The merging of the University and Henley Business School retained a global business school brand for TVB, as well as transforming the University's capabilities to support business growth and executive development in the region.

¹ Thames Valley Berkshire refers to the geographies within the Local Enterprise Partnership (LEP) area – the key economic partnership structure for the region. It includes Bracknell Forest, Reading, Windsor and Maidenhead, Slough, Wokingham and West Berkshire local authorities.

² Gross Value Added (GVA) is the key measure of the value of goods and services produced by an organisation, sector or region. It is measured as the difference between income and the value of bought in goods and services, or the sum of gross profits before interest costs, taxes, depreciation and amortisation and total employment costs.

- The establishment and operation of **Thames Valley Science Park** on the M4 corridor provides TVB with the potential to grow future clusters of high technology, high value activity, linked up with academics, in a key UK strategic location.
 - Arts Council England funds annual grants to organisations that are listed in their National Portfolio, which gives additional recognition and prestige to the significant work these organisations are doing, The **Museum of English Rural Life (MERL)** is one of Reading's premier cultural visitor attractions, and its success as Reading's first National Portfolio Organisation (NPO) provides a foundation on which the town's relative arts and culture cold-spots can be redressed.
 - **The University's research excellence**, attracting centres such as the European Centre for Medium-Range Weather Forecasting (ECMWF), puts the University and the region at the forefront of tackling key societal and environmental challenges globally and locally.
- v. Given the aspirations for 'Global Britain' and the critical importance of connectivity for the Thames Valley economy, the University is a very important asset for the region, with global reach:
- It has 6,200 international students from 140 countries, representing 27% of all students at the Reading campus (well in excess of the sector average of 20%).
 - 20% of research grants and contract income come from international sources.
 - It has a network of international campuses and sites around the world. The Henley Business School alone operates in 17 countries through affiliate campuses and sites or full local campuses.
- vi. These international sites serve both to benefit the host locations (e.g. by providing employment, skills development, knowledge exchange) and to generate benefits for Reading, the Thames Valley and the UK (e.g. export earnings, international networks, and enhanced brand profile for Reading).
- vii. Alongside these impacts, the University demonstrates positive **leadership** credentials in exercises like Reading 2050; **partnership** working with the LEP and many other business, public and community institutions; and **citizenship** responsibilities in, for instance, its extensive involvement with the Whitley area and community.
- viii. Our analysis has, therefore, shown that the University has already been engaged in civic activities across a wide range of domains. The report concludes by considering opportunities for the University to further enhance these contributions, seen through a leadership/partnership/citizenship lens. These include:
- Supporting Reading's transition to being recognised as a major city (of Green Technology, Culture & Heritage, Rivers & Parks).
 - Further elaboration of the concept of a relocation of Royal Berkshire Hospital supported by the increasing and closer clinical, teaching and research links between the University of Reading, the Hospital and the Berkshire Healthcare Foundation Trust as a key anchor for modernising TVB's health and care systems. Working with the Borough and employers to increase long term graduate retention and thus provide a net boost to the number of working age residents year on year, in an era of an aging population.
 - Further leveraging the University's global reach for the benefit of the local economy, in the face of the challenges raised by Industry 4.0 and Brexit.

- Finally, within the realm of blue sky thinking, considering opportunities to work with partners to grow the HE sector presence in Thames Valley Berkshire to match the densities seen elsewhere, for example, in neighbouring Oxfordshire.

ix. A summary of the key facts and figures from our assessment is provided below.

ECONOMIC AND SOCIAL CONTRIBUTION OF THE UNIVERSITY OF READING

UNIVERSITY OF READING'S ECONOMIC FOOTPRINT



11,550
FULL TIME
EQUIVALENT JOBS

supported by the University
across the UK



£800m
ANNUAL GROSS
VALUE ADDED (GVA)

supported, equivalent to
1.3% of all GVA in the
Thames Valley area



**1 IN EVERY
27 JOBS**

in Reading and
Wokingham can be traced
back to the University

3,400



AT AN AVERAGE
SALARY 25% ABOVE
THE UK

£289m



THIRD BIGGEST
INCOME GENERATOR
OF ALL UNIVERSITIES
IN THE SOUTH EAST

£590m



INVESTED IN
FACILITIES OVER
PAST DECADE

STUDENT EXPENDITURE EFFECTS

**600 FULL TIME
EQUIVALENT JOBS**



supported in Reading by the
off-campus expenditure of
students

27%

STUDENTS

come from overseas to
study at the University



RESEARCH AND INNOVATION

£35.6m

research income
generated in 2016/17

5,000

direct jobs will be hosted at
Thames Valley Science Park

22%

growth in collaborative
research income since
2013/14

2.3 times

the proportion of
research income from
industry compared to
all UK universities

INTERNATIONAL ROLE

6,200

international students
from 140 countries

5

UK and international
sites and campuses

20%

research & contract
income comes from
international sources

300

Chinese students can study
towards a UoR degree at
the NUIST-UoR Academy
per annum

CONTRIBUTION TO SKILLS DEVELOPMENT



81%

graduates go
on to work in
managerial &
professional
occupations



74%

graduates from
2016/17 cohort
in employment
6 months after
graduating



22%

of employed
graduates from
2016/17 cohort
working in
Thames Valley
Berkshire

SOCIAL & CULTURAL CONTRIBUTION

28,600

attendees at
UoR exhibitions
in 2015/16

**Key partner
role**

in development of
Reading 2050 vision

**Museum of English
Rural Life**

only museum in Reading
to have achieved National
Portfolio Organisation
Status

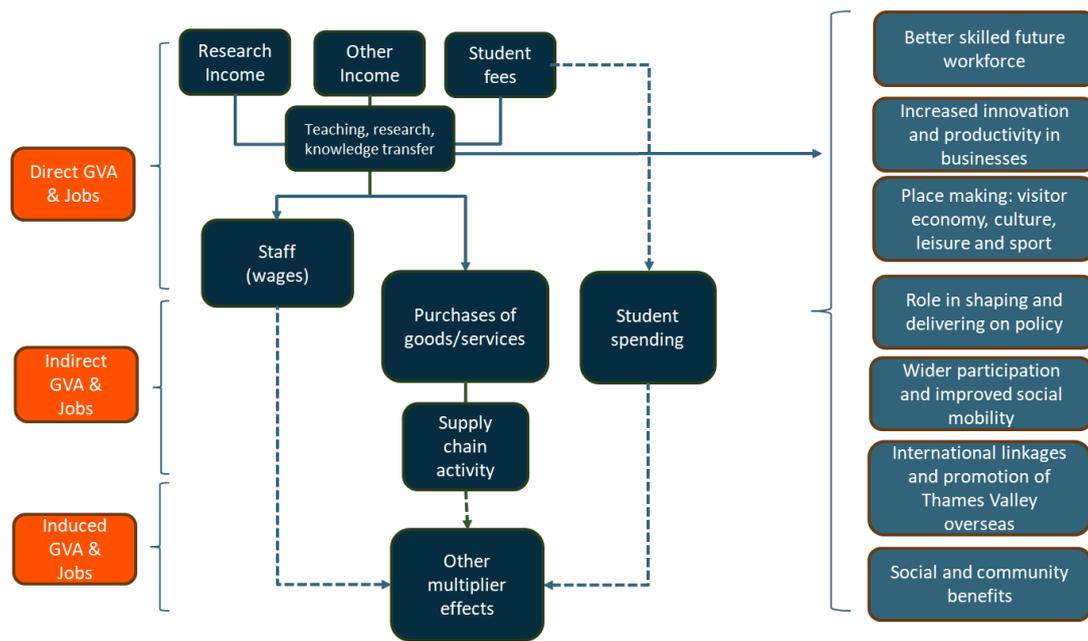
Ranked 22nd
university in the UK
for no. of attendees
at chargeable
museum education
events

1. Purpose of the report

Scope of the study

- 1.1 This impact report provides a detailed examination of the University of Reading's socio-economic contributions locally, regionally and nationally. It goes beyond a traditional impact report to respond to the demands of the civic age—in doing so it:
- Provides a full stocktake and analysis on these economic and social contributions
 - Places these contributions into their wider economic and policy context at a national and local level
 - Reflects on where the opportunities are for enhancing these contributions in future.
- 1.2 The report covers the full range of impacts, including:
- ***Demand-side effects:*** The economic activity and expenditure the University brings to the area as a direct employer, a purchaser of local goods and services, and an attractor of students and visitors to the area.
 - ***Supply-side effects:*** The University's contribution to enhancing the skills and productivity of the workforce and business base via skills development and work with businesses and other organisations.
 - ***The University's international role:*** The strategic and economic benefits from the University's international linkages and operations (both for the Thames Valley, UK and the host countries)
 - ***Social and cultural effects:*** The social effects arising from the University's work with the community, widening participation efforts, cultural activities and strategic links with public sector organisations.
- 1.3 A summary of these effects is provided in the diagram below.

Economic and social impact framework



- 1.4 The report makes use of a range of existing datasets and other material supplied by the University, economic modelling, consultations with both senior University staff and external stakeholders, and published economic data.

Impact areas and time period

- 1.5 The study focuses on the impacts for four spatial impact areas:

- The combined local authority districts of Reading and Wokingham
- Thames Valley Berkshire LEP area
- The South East³
- The UK

- 1.6 The study draws upon data from the academic year, 2016/17, whilst also covering activities that have developed over time, alongside future plans.

Measures of impact

- 1.7 Where possible, the report quantifies impacts in economic terms (Gross Value Added⁴ and Employment). Not all of the University's socio-economic contributions can be robustly expressed in these terms. Where this is the case, we draw on other statistics to illustrate the scale of the impact, along with case studies of good practice.

³ Note: does not include London.

⁴ Gross Value Added (GVA) is the key measure of the value of goods and services produced by an organisation, sector or region. It is measured as the difference between income and the value of bought in goods and services, or the sum of gross profits before interest costs, taxes, depreciation and amortisation and total employment costs.

Structure of the report

- 1.8 The report starts with national and local context, focussing on the recent changes in national policy and their implications for the UK higher education (HE) sector; then, it looks at the socio-economic position and performance of Reading and the Thames Valley. It goes on to examine the various sources of impact in turn, before concluding with thoughts for the future.
- 1.9 Our evidence base report provides full details on all of the above. The following report presents the key points from each of the relevant sections.

2. The policy context

- 2.1 National policy developments in higher education and economic development, along with wider trends in public perception, have come together to place an extraordinary focus on the economic and social value of the HE sector.

The Higher Education and Research Act (HERA)

- 2.2 HERA gained Royal Assent in April 2017 and has brought in sweeping regulatory and institutional changes, including the introduction of new performance metrics, which are already serving to put pressure on universities to be more engaged with their communities. These include:

- the Teaching Excellence Framework (TEF) – which assesses universities, amongst other things, on their contribution to graduate outcomes
- the Knowledge Exchange Framework (KEF) – currently in development, which will assess Higher Education Institutions (HEIs) on their knowledge exchange activities.

- 2.3 The newly created Office for Students (OfS) is explicitly tasked with working with providers and employers to address skills gaps and improve employability. HERA also saw the creation of UKRI, bringing together the seven Research Councils, Innovate UK and a new organisation, Research England. The objective has been to better join up different research disciplines to respond to societal challenges.

- 2.4 A useful summary of the link between the civic role of universities and the student experience was provided in early 2018 in a speech by the then Minister for Higher Education:

*“The environment that universities provide is vital...**the connections to the wider world provided by a University with an international student base; the connection to businesses, whether local, national or international that provide pathways to work and valuable networks; the links to local communities that make universities rooted and engaged.** It is by fulfilling **this vital civic role** that universities can best deliver for students—helping them transform their life chances, and changing the country for the better.”⁵*

Industrial Strategy

- 2.5 The national Industrial Strategy White Paper sees a central role for universities in driving up productivity, given their role in driving skills and innovation alongside their economic importance to towns and cities across the country. Amongst a range of things, the strategy:

- identifies four Grand Challenges (artificial intelligence and data, ageing society, clean growth, and future of mobility) within which universities and industry are expected to play their role in addressing through collaboration and partnership work
- commits to developing Local Industrial Strategies, aimed at identifying local strengths, challenges and opportunities in respect to productivity and competitiveness, building on world-class science and innovation.

- 2.6 This is backed by the largest increase in public funding for Research and Development (R&D) in any parliament since 1979, for example, through the Industrial Strategy Challenge

⁵ *A Revolution in Accountability*, speech by Sam Gyimah at launch of Office for Students, 28th February 2018. <https://www.gov.uk/government/speeches/a-revolution-in-accountability>

Fund, Strength in Places Fund and an increase in the size of the Higher Education Innovation Fund. There has, however, been increasing concentration of research funding at fewer institutions, and therefore increasing competition - which is a factor for a medium-sized institution like Reading.

Wider developments

- 2.7 These developments have coincided with a perhaps unprecedented scrutiny on the value of universities, as well as an austerity-driven expectation of HEIs to deliver local services as the public sector has retrenched.

The Civic University concept

- 2.8 The concept of the Civic University is not new, and there is an extensive stock of literature on the topic. Prominent amongst this is the work of John Goddard, the former Deputy Vice Chancellor at the University of Newcastle. This work outlines various dimensions of an engaged Civic University, as an institution which views engagement as integral to its mission, integrating social objectives into its teaching activities, orienting research towards regional socio-economic impact and engaging with business and the community.
- 2.9 These ideas have been developed and applied in the Warwick Chancellor's Commission, a recent major review of the University of Warwick's role in its region. We have applied aspects of the *leadership-partnership-citizenship* model that was developed for this review in our assessment of the University of Reading's civic role:
- **Leadership:** the strength of commitment at the senior leadership level to playing an integral role in the region's economic and social development
 - **Partnership:** the extent to which the University works with partners and beneficiaries to design, deliver, manage, and evaluate regional interventions
 - **Citizenship:** the University's role as a "good citizen", working with the communities where its presence has the most significant impacts, positive and negative.
- 2.10 These ideas are revisited in the concluding section of this report.

3. The local economic and policy context

- 3.1 The University of Reading sits on the border between Reading and Wokingham districts and within the Thames Valley Berkshire Local Enterprise Partnership (TVB LEP) area. Reading and the Thames Valley are highly successful economies. Indeed, the TVB LEP is the most productive region outside London, and Reading is one of the most productive cities in Europe, having developed as a strong centre for business and professional services and for tech companies. This is reflected in a range of indicators: the areas outperform national benchmarks on earnings, skills, employment and the knowledge-intensity of occupations. Recent research by PWC found Reading to be one of the best towns or cities in the world to live and work in the UK⁶.

The University of Reading within the Thames Valley Berkshire LEP, and Productivity by LEP area, 2016



Source: Hatch Regeneris, Contains OS Data © Crown copyright and database right, 2018

- 3.2 The LEP’s Strategic Economic Plan (SEP) highlights the importance of tech-based activity, the internationalisation and connectivity of the TVB economy and the role of corporates in driving this success.
- 3.3 Notwithstanding this success, LEP policymakers have identified a number of important challenges and opportunities faced by the local economy, some (but clearly not all) of which the University has a potential opportunity to help address. These include recruitment challenges, especially STEM skills; graduate retention in the face of competition from London and an ageing workforce; the need for more innovation activity in the tech sector; the thinness in links and networks between businesses and the knowledge base; and the lack of a sufficiently strong pipeline of next generation tech-based businesses and start-ups.
- 3.4 At the local level, researchers from the University have played an active and key role in the development of the Reading 2050 Vision, working in partnership with Reading UK CIC. The vision highlights Reading’s strong growth, but contrasts this with challenges including deprivation, poor health, poor education, and environmental issues. The Vision was launched in October 2018. It sits alongside the Local Plan, and aims “to support our Local Authority in driving this ambition further, with opportunities for all, in the long term.”
- 3.5 The vision sees the University’s presence as exhibiting and testing new ideas and approaches from many disciplines with a drive towards the transfer of information and

⁶ PWC (2018) *Good Growth for cities*

knowledge through collaborative working to meet social, environmental, and economic need. It also acknowledges the University's role across its core themes:

- green tech – Green Tech City
- culture and diversity – a City of Culture and Diversity
- rivers and parks – a City of Rivers and Parks

3.6 The vision also specifically highlights utilising the strengths of the University of Reading in research and development in the built environment, energy, and climate research, as well as driving technology-led projects.

4. The University's economic footprint

4.1 We have examined the various sources of the University's directly quantifiable contribution to the economy. This demand-side assessment has several distinct elements, which are outlined below.

- **Direct effects:** the economic activity supported on UK campuses, both within the University and its tenants
- **Indirect effects:** the University's role as a purchaser of goods and services from other organisations, and the consequent multiplier effects that are generated
- **Induced effects:** the further multiplier effects supported by the personal expenditure of the University's staff and those in its supply chain
- **Student expenditure effects:** the economic impacts arising from the off-campus expenditure of students
- **Visitor expenditure effects:** the additional expenditure and economic impact generated via the attraction of visitors to Reading.

4.2 We consider each of these in turn and then put them into context.

Direct effects

4.3 As of 2018, the University employed around 3,400 people on a Full Time Equivalent (FTE) basis, an increase of around 600 FTEs since 2007. This includes a relatively small number (190 FTEs) on international campuses and sites.

4.4 The roles span a range of occupations including academics, professional services, management and administration. Overall, the jobs are largely highly skilled: the average salary per FTE was almost £36,000 per annum, which compares to £32,000 in Reading, £34,000 in the Thames Valley Berkshire LEP and £28,000 in the UK. Most staff live locally—a third live in Reading and almost a quarter (23%) in Wokingham.

The University directly employs 3,400 FTEs at an average salary some 25% in excess of the national average

4.5 The University has one of the largest land holdings of any University in the UK: the third largest after Oxford and Cambridge. In addition to the core University jobs, the University also hosts a community of innovation and knowledge-based companies at the Thames Valley Science Park (TVSP), The Science & Technology Centre and Reading Enterprise Centre. We estimate that these companies collectively employ up to a total of **1,450 direct FTEs**.

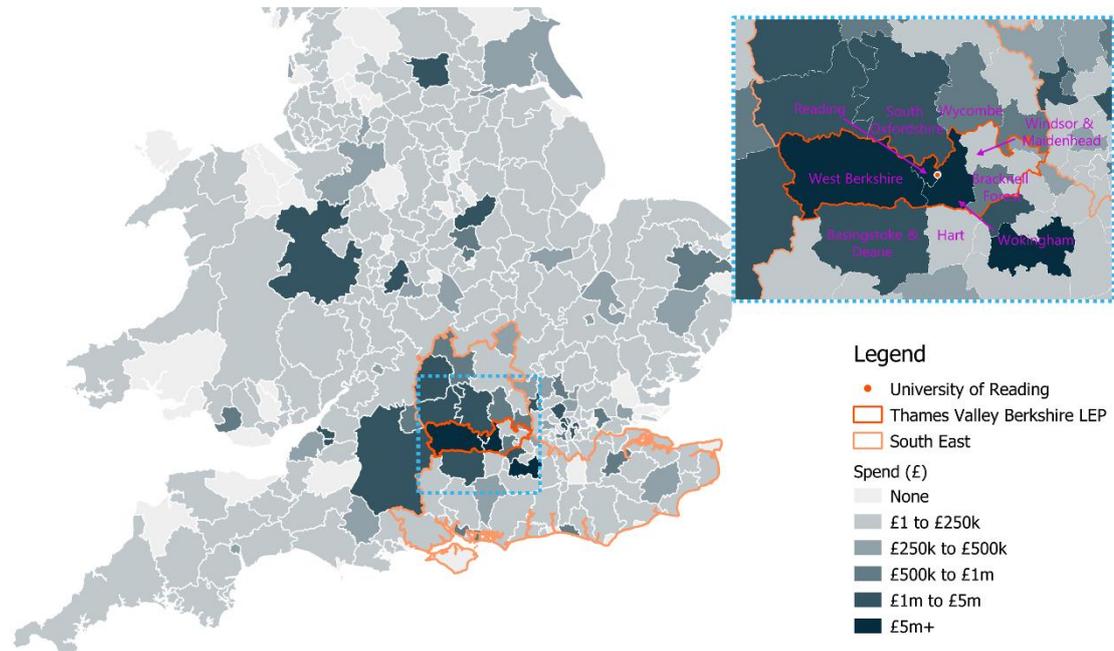
4.6 The University generated an income of £289m in the academic year 2016/17. In the South East, it was the third biggest income generator after Oxford (itself the second largest in the UK) and Southampton. There has been positive income growth year-on-year since 2000, with an increase in revenue of £171m—equivalent to average annual growth rate of 8%.

4.7 This income supported **£190 million in direct Gross Value Added (GVA)** in 2016/17 for the University, with an additional £145 million in direct GVA from the other companies based on campus and at the TVSP.

Indirect effects

- 4.8 Over the years, the University has made substantial investments in facilities. The University's capital expenditure has averaged £54m per year over the past decade, equivalent to a total investment of around £590m in its campuses and sites during the period. In recent years, this expenditure has increased further. It has invested more than £190m in the last three years. This includes contributing to public infrastructure such as a new bridge over the M4, as part of the development of the TVSP.
- 4.9 In 2016/17 the University of Reading spent over £100m on goods and services from UK-based businesses (operating and capital purchases), of which £21 million was spent in the TVB area.

Map of spend on suppliers, 2016/17



Source: Hatch Regeneris analysis of University of Reading purchasing data

- 4.10 This supply chain expenditure provides a significant injection of demand into the economy. We estimate that in 2016/17 the University of Reading supported £90m in GVA and 2,000 FTE jobs through its supply chain expenditure across the whole of the UK (these are known as *indirect effects*).

Indirect Economic Impacts, 2016/17		
	GVA impact (£m, 2015/16 prices)	Jobs supported (FTE)
Reading	<10	90
Thames Valley Berkshire LEP	10	280
South East England	50	1,000
UK	90	2,000

Calculations by Hatch Regeneris based on data provided by University of Reading.

Note: Excludes the indirect jobs supported by the tenants based at the TVSP and other facilities.

Staff expenditure effects

- 4.11 As highlighted earlier, the University supports many high skilled jobs and therefore well-paid roles, so its employees tend to have higher than average disposable income. The economic impacts generated through their expenditure and those in the supply chain (known as *induced effects*), are summarised below.

Summary of Induced Economic Impacts, 2016/17		
Area	GVA impact (£m, 2016/17 prices)	Jobs supported (FTE)
Reading	10	110
Thames Valley Berkshire LEP	20	240
South East England	60	750
UK	90	1,200

Calculations by Hatch Regeneris based on data provided by University of Reading.

Note: Excludes the induced jobs supported by the tenants based at the TVSP and other facilities.

Student expenditure effects

- 4.12 In 2016/17 there were 16,000 students studying at the University, of which the vast majority 14,000 (86%) study at the University of Reading's campuses in Reading, and the remainder were at the international campuses and sites. Around one in every 16 students in all 19 South East universities are at Reading. The University has a significant proportion of students coming from overseas to study in the UK (27%), which compares to the sector average of c.20% across all UK universities.
- 4.13 These students are a significant part of Reading's population. 1 in every 12 working age residents in Reading studies at the University. Students living in Reading during term time account for more than half of the population between 18 and 24 years old.⁷
- 1 in every 12 working age residents in Reading is a student at the University**
- 4.14 The University draws in large numbers of students from outside Reading and the Thames Valley: 97% and 90% respectively. As a consequence of its wide reach, the University effectively sucks in additional expenditure to the local economy in term time from these students. The expenditure of the large cohort of international students represents a source of export earnings for the UK. We estimate that international students alone spend at least £45 million per annum off-campus.
- 4.15 We estimate that University of Reading students spend more than £160m in the UK economy annually, outside the campus itself. A significant proportion is captured by retail services, while students also have high levels of expenditure in the night-time economy, and student housing sector. It should be noted that there can be negative impacts on the local area from some types of expenditure and related behaviour, including antisocial behaviour related to the night time economy. The University proactively takes steps to mitigate and address these issues – these are discussed further in section 8. Further, although there is no data available to confirm this, an element of housing expenditure is likely to “leak” out of the local economy if rental income goes to landlords based outside Reading and the Thames Valley.

⁷ Source: ONS Mid Year Population Estimates.

- 4.16 In total we estimate that this supports 2,200 FTE jobs in the UK, of which around 900 are in the Thames Valley Berkshire LEP area and over 700 in Reading. The vast majority of those in Reading and the LEP area are net additional jobs.

Summary economic impact of University of Reading students' expenditure, 2016/17				
	Total impact: all students		Of which FT students from outside impact area	
	GVA	Jobs (FTE)	GVA	Jobs (FTE)
Reading	45	620	40	590
TVB LEP	50	770	40	640
South East England	110	1,500	70	1,000
UK	130	1,900	30	500

Source: Hatch Regeneris calculations based on data provided by the University of Reading

Visitor-related effects

- 4.17 The University attracts a significant volume of visitors, and hence associated expenditure, to Reading. This happens through a number of channels including, for example, open days, graduations, conferences, and events for the public. In total over the 2016/17 academic year, there were at least 89,500 recorded visits to these events, which is roughly equivalent to the capacity of Wembley Stadium. Although we do not have data on this, given the nature of the events, a significant proportion can be expected to come from outside Reading.
- 4.18 Given the numbers of students from outside the area, these students attract a significant volume of visits to Reading from friends and relatives, a large portion of which will be from overseas given the international cohort. We estimate that such visits supported a further £1 million in GVA in Reading 2016/17.

Summary of economic contributions

- 4.19 Drawing all of these demand-side contributions together, we estimate that the University supported a total of **11,550 FTE jobs in the UK and £800 million in GVA**, of which around 55% is in the Thames Valley. To put this into context, this means that:

1 in every 27 jobs in the whole of Reading and Wokingham can be traced back to the University

- around 1 in every 27 jobs in the whole of Reading and Wokingham can be traced back to the University.
- this GVA contribution is equivalent to 1.3% of all GVA in the Thames Valley area.
- for every direct job at the University there are a further 2.4 jobs supported across the UK economy.

Summary Economic Contribution of the University of Reading, 2016/17		
	GVA impact in area (£m, 2016/17 prices)	Jobs supported (FTE) in area
Reading and Wokingham	420	5,800
Thames Valley Berkshire LEP	480	6,450
South East	640	8,950
UK	800	11,550

Calculations by Hatch Regeneris based on data provided by University of Reading.

5. Contribution to skills development

The policy context

- 5.1 Universities have always been a primary supplier of higher-level skills into the economy. Recent developments in national policy have seen the lens focus more closely on this role. The creation of the OfS and the national Industrial Strategy place emphasis on graduate outcomes, improving digital skills, supporting STEM subjects and apprenticeships. The Teaching Excellence Framework (TEF) includes measures of graduate outcomes.
- 5.2 Although Reading and the Thames Valley Berkshire area have a highly skilled workforce, the LEP identifies a number of skills issues including a shortage of STEM skills and highly qualified staff for tech-based sectors, challenges in retaining staff given competition from London and an ageing workforce. Employers have turned to international labour markets to fill these gaps, but with Brexit there is uncertainty at present as to whether this is sustainable.

The University's role and performance

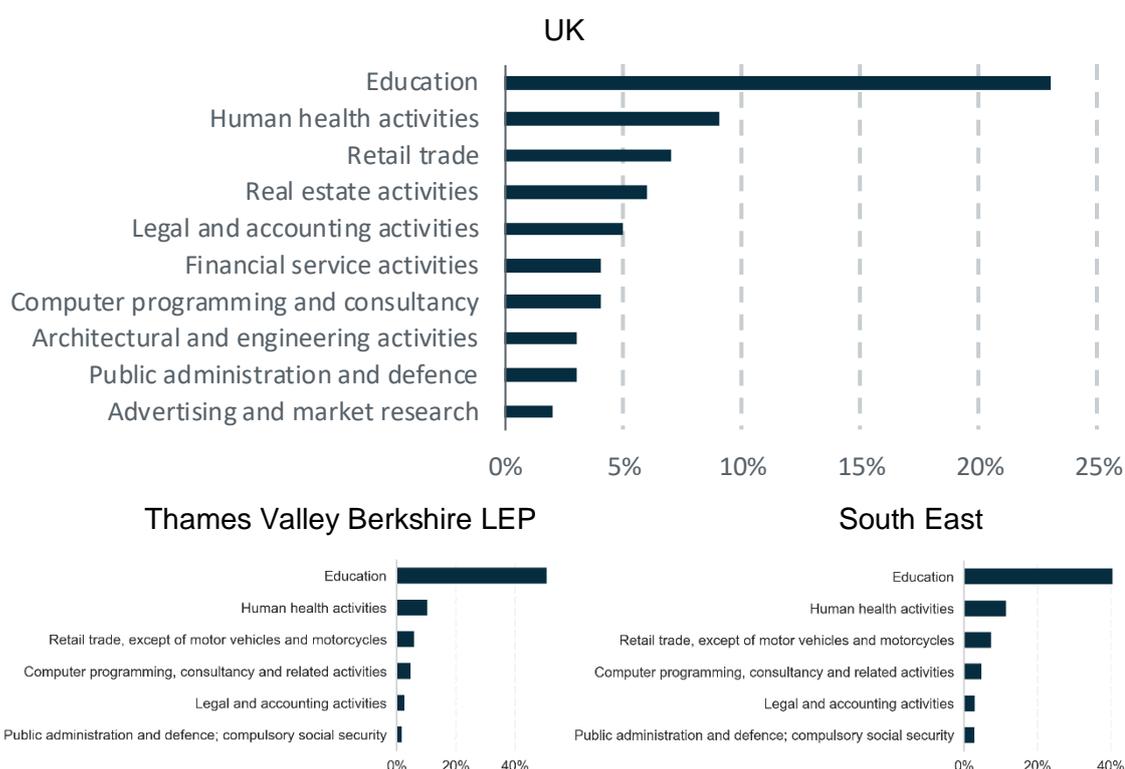
Graduate outcomes

- 5.3 The University generally performs well on graduate outcomes. 74% of graduates in the 2016/17 cohort were in employment 6 months after graduating (compared to 73% nationally). Of these, 22% were living in the Thames Valley Berkshire area and 8% were located in Reading. Thames Valley Berkshire was the second most popular LEP area destination after London. Given that such a large proportion of students originally come from outside these areas the University is playing a role in boosting the labour supply.

22% of graduates went into jobs in the Thames Valley Berkshire area, with especially notable links to schools and the digital sector

- 5.4 On a longer term basis, there is a clear opportunity for the University to play an important role in addressing the issues of the ageing population in Reading and more widely.

Percentage of employed graduates by sector



Source: DLHE survey 2015/16 leavers

- 5.5 81% of graduates go on to work in managerial and professional occupations. Many of the sectors in which graduates are working are highly skilled, knowledge-intensive sectors, such as legal and accounting activities, computer programming and consultancy, financial service activities, architectural and engineering activities, and advertising and market research.
- 5.6 At a local level, there are some especially notable sectoral relationships, including with the ICT sector and with schools. Over 50% of graduates go on to work in education in the LEP area. The Institute of Education plays an important role here through its strong relationships with schools in the area.
- 5.7 The economic effects of these graduate outcomes manifest themselves as earnings uplifts and productivity benefits throughout the graduates' working lives. We estimate that, for the 2016/17 graduate cohort, these effects amount to £370 million for the UK over the course of their working lives (in present value terms and 2016/17 prices).

Employer engagement

- 5.8 Alongside supplying graduates into the local and wider economy, the University proactively engages with employers on skills needs, as well as more widely with respect to research and innovation (see Section 6).
- 5.9 A dedicated central employer engagement team works with employers locally and further afield. Given its focus, the **Henley Business School (HBS)** is particularly active on employer engagement in relation to skills development, through:
- internships, placements and MBA projects. In 2016/17, around a third of its students on placement were with employers located in the Thames Valley. Of these, 60% were working with companies in the ICT sector.

- developing degree apprenticeships and related courses. A good example is the PwC Flying Start Programme – see the case study below.
- the provision of CPD for employers locally and further afield. Overall the University of Reading ranks 20th of all UK universities for income generation from CPD activities, 4th out of 19 HEIs in the region—and 2nd out of the 18 HEIs in the former 1994 Group. Much of this CPD activity is delivered by HBS.

5.10 Indeed, more generally, HBS is a particularly notable example of a major strategic intervention led by the University. The University took over the HBS in 2008 when it was Henley Management College and merged it with the existing business school at Reading. It has since developed as a leading business school, ranked in the top 30 business schools in the world for its MBA. The Economist recently ranked it as having the best alumni network of all business schools in the world.⁹

Flying Start

The Flying Start Degree Programme is an undergraduate (BA) Accounting and Business degree delivered by Henley Business School in partnership with PwC and ICAEW. It is a four-year programme based at Henley Business School, involving studying as a full time student for four years and paid work experience and training with PwC's Assurance practice. The programme is one of the fastest routes to becoming an ICAEW Chartered Accountant in the UK.

The modules, having been co-designed with the ICAEW and PwC, exempt students from 12 out of the total 15 ICAEW professional examinations. All lecturers on the course are ICAEW Chartered Accountants with professional experience in the field.

Many students develop strong relationships with PwC whilst working there during their studies and, upon receiving a 2:1 in their degree, are invited to work at PwC on a permanent basis—which includes support taking three more ICAEW examinations to become a fully qualified Chartered Accountant within a year of graduation.

5.11 Wider business engagement activities are covered in Section 6.

⁹ The Economist (March 24th 2017), *Who you know, not what you know: The 15 highest-ranked alumni networks at business schools*

6. Research, innovation and enterprise

The policy context

- 6.1 There are strong expectations of universities to drive the productivity agenda through research and innovation. The Industrial Strategy places HEIs at the centre of this. Notably, it includes provision for the largest increase in public funding for R&D in any Parliament since 1979, principally through the Industrial Strategy Challenge Fund and an increase in the size of the Higher Education Innovation Fund. This is accompanied by the creation of the Knowledge Exchange Framework (KEF), which builds on the metrics used in the HE-BCI return that has been in place for many years to assess universities' performance on knowledge exchange activities.
- 6.2 The Thames Valley Berkshire LEP identifies important local R&D challenges, including the need:
- for more R&D within the multinationals located there
 - to strengthen links between businesses and the knowledge base, including universities
 - to enhance the pipeline of tech-based start-ups and to improve rates of commercialisation.
- 6.3 Research and development includes research in the traditional, academic sense, but it is largely concerned with activity undertaken by businesses to innovate, introduce and improve its products and processes.

The University's role and performance

Research

- 6.4 The Research Excellence Framework (REF) 2014 overall quality profile indicates that 98% of the University of Reading's research is recognised internationally, an increase of 10% on the 2008 Research Assessment Exercise results. Additionally, 78% of research is rated as internationally excellent and 27% as world leading. Overall, the UoR ranks 19th in the UK when quality scores in the REF are weighted for research intensity.
- 6.5 The University generated £35.6 million in research income in 2016/17, an increase in £2.8 million on the past year alone. The number of staff engaged in research has increased by 9% since 2012/13.
- 6.6 The University displays a clear strength in **agriculture and food science** research, ranking 4th in the UK by research power in this area. Research power provides a measure of volume of research multiplied by quality (ie REF GPA multiplied by full time equivalent number of staff). The Science and Innovation Audit, Innovation South,¹⁰ highlights the University of Reading as being a leading centre for **food, health and environmental research**. It also emphasises the University's strength in **data science and modelling**, as demonstrated by

78% of the University of Reading's research is internationally excellent

¹⁰ This was a major study into innovation clusters in the South of England, part of a series of studies invited by the Department for Business, Energy and Industrial Strategy (BEIS), led by consortia around geographic and technological themes. These consortia are made up of businesses, universities, research and innovation organisations, Local Enterprise Partnerships (LEPs) and their equivalents in the devolved administrations.

its partnership in Agrimetrics. The University was a founding partner in this, the world's first centre of excellence bringing together expertise in big data and agri-food research.

- 6.7 The University is recognised for world-leading research in **weather processes and climate research**, supported by work with the Weather and Earth Observation & Space Research Divisions within the Department of Meteorology, collaboration with the National Centre for Atmospheric Science and an academic relationship with the Met Office and the ECMWF (outlined in more detail in the case study below).

Plans for World-Leading Forecasting Centre at University of Reading

The University of Reading's expertise in Earth Systems and Environmental Sciences is reinforced through strong links with leading meteorological and observational organisations, including the European Centre for Medium-Range Weather Forecasts (ECMWF). In late 2017, the University was awarded sole bidder status by the UK government for the new European Centre for Medium-Range Weather Forecasts (ECMWF) headquarters, after facing competition from other potential sites for several years.

The Council for the ECMWF has requested that the proposal for the new staff headquarters accommodation and conference facilities on the University's Whiteknights campus go ahead. The project would be funded by ECMWF and the Department for Business, Energy and Industrial Strategy (BEIS). Investigation work for the project is due to take place in the coming months before the final decision is announced by ECMWF's Council in June 2019.

The University is already home to the ECMWF Copernicus Department, part of the European Earth Observation Programme. The Copernicus Department leases approximately 8,300 sq. ft. on the Whiteknights campus and has brought 50 experts to the campus. The Copernicus Climate Change and Atmosphere Monitoring Services works to improve the standard of forecasting and measuring atmospheric conditions and climate change across Europe.

- 6.8 The University harnesses these capabilities to deliver research with a real world impact. Two recent examples are highlighted below.

Research with Real World Impact: Making Milk Healthier

Professor Ian Givens, from the University's School of Agriculture, Policy and Development has put his research into practice by reducing the saturated fat content of milk, to make it healthier for consumers. He has achieved this without reducing the overall fat content of milk, instead through altering the diet of dairy cows. The University recognises the importance of research into links between food and health, and Professor Ian Givens highlights that innovations in nutrition and food production can offer solutions.

This innovative method is already benefitting 3 million milk consumers, having been adopted by Mark & Spencer for their main brand of milk. Professor Givens has been named the BBSRC Innovator of the Year for his work on reducing the saturated fat content of milk, as well as winning £30k to support his research.

Exceptional Research Impact: Furthering Understanding of Flood Risk

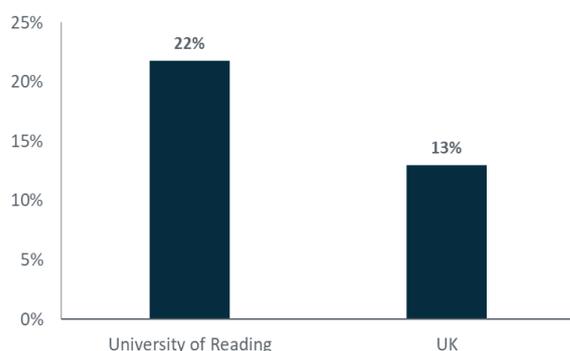
Professor Hannah Cloke, building on the recognised impact of the University's environmental science research, has led a continuous programme of NERC-funded research which has brought about changes in decision-making practices, improved flood warnings and reduced flood risk both in the UK and internationally.

Through her research, Professor Cloke has developed new methods for identifying flood forecast uncertainty. She has worked together with UK industry and flood forecasting agencies internationally to improving early warning systems to better prepare for flooding. Professor Cloke works jointly in the Departments of Meteorology and Geography and Environmental Science at the University (exemplifying the University's cross-discipline, thematic approach to research), carrying out research in forecasting and modelling environmental processes and natural hazards. In 2015, she won the NERC Impact Award for 'early career researcher' in recognition of exceptional economic and / or societal impact within the UK and internationally. She now advises the UK government on flood prevention and response for national and international flooding incidents.

Knowledge transfer and business engagement

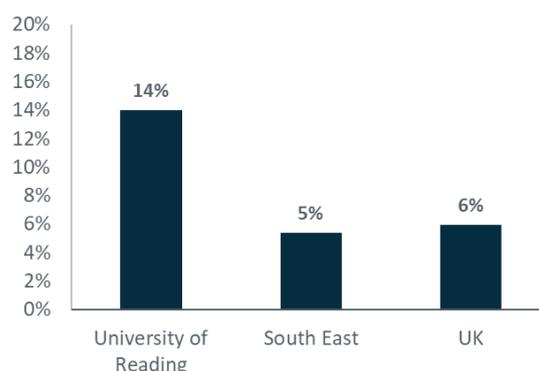
- 6.9 The University's strategy for knowledge exchange has increasingly been moving towards a demand-led approach, built upon the needs of businesses. It responds to the challenges set out in local policy, especially the identified need to enhance links between businesses and the region's knowledge assets. In support of these strategic aims, the University has invested significantly in these activities, managing and supporting them through the Knowledge Transfer Centre (KTC) and launching the "Front Door" to provide a clear and simple route into the University for businesses. These initiatives are recognised by partners we have consulted with as having enhanced the visibility of the University's offer to business. Reflecting the success of this approach, the team was significantly expanded in 2017.
- 6.10 The impact of this focussed approach can be seen in the very strong growth in income from knowledge exchange activities. Income involving business and community interaction increased by 8% between 2013/14 and 2015/16, which is in excess of the regional and national averages. Within this, there has been exceptional growth in income from collaborative research, which has increased by 22% during the same period, well in excess of the sector average of 13%. Indeed, the university's share of research income from UK industry is more than double that of the sector as a whole, and almost three times that of all universities in the South East.
-
- Income from collaborative research rose by 22% between 2013/14 and 2015/16, compared to 13% across the sector**
-

Figure 6.1 Growth in collaborative research income 2013/14 – 2015/16



Source: HEBCIS 2013/14 and 2015/16

Figure 6.2 Proportion of research grants and contracts that come from UK industry



Source: HESA Finance Record, Research Grants and Contracts Income by Source, 2015/16

- 6.11 The University has a long history in delivering knowledge exchange, and since 1975, has delivered over 250 knowledge transfer partnerships (KTPs). An example of a recent high profile KTP is that undertaken with Ella’s Kitchen.

Knowledge Transfer Partnerships (KTP) with Ella’s Kitchen

Ella’s Kitchen is a company that produces organic baby food and organic baby products. The business focuses on developing healthy, convenient products and projects/campaigns to enable children to develop healthy relationships with food.

The company has participated in three KTPs with the University of Reading. The first project involved Ella’s Kitchen working together with academics from Henley Business School and the School of Psychology and Clinical Language Sciences to improve children’s perceptions of healthy food. Through the University’s support, the company was able to introduce a new multi-sensory marketing approach.

For the second and third KTPs, Ella’s Kitchen worked with the University’s School of Food and Nutritional Sciences. The company’s second KTP focused on improving their approach to sourcing raw materials. This has helped Ella’s Kitchen to decrease costs while maintaining consistently high-quality products. For their third KTP, Ella’s Kitchen focused on improving their food packaging to gain a competitive advantage.

These KTPs have helped the company to develop new skills and brought new knowledge and innovation to the business. This, in turn, has helped the company to improve quality, and reduce costs. Ella’s Kitchen is now the number one baby food brand in the UK and sells products globally. It has a 30% share of the UK baby food sector and a global turnover of \$121 million.

Facilities for business

- 6.12 A key, distinctive aspect of the University’s offer to business is the scale, range and quality of facilities available to industry. The University has generated the 14th highest level of income of all 162 UK universities from the provision of facilities and equipment in 2013/14 – 2015/16 : £4.6m per annum on average over the period.

- 6.13 The University has hosted commercial space over a number of decades, being home to the successful Science and Technology Centre for over 25 years on the Whiteknights Campus. The Science and Technology Centre comprises 30,000 sq. ft of lettable

The Whiteknights campus hosts 150,000 square feet of commercial space for business

space, and the Reading Enterprise Centre, the dedicated business centre, comprises 45,000 sq. ft of business incubation and grow-on space. These two centres, plus the RSSL (the global R&D Centre for Mondelez) bring the amount of commercial space on the campus to close to 150,000 sq. ft. Knowledge-based companies on Whiteknights campus range from start-ups or established SMEs to large, global enterprises such as Mondelez.

From Incubation to International Success: MediaSift Ltd

MediaSift (DataSift) are a data analytics company established in the business incubator at the University of Reading in 2007. Attracted by the proximity to the University, its supply of students and graduates, and a strong business support environment for an early stage company, MediaSift went through several rounds of growth.

Four years of steady growth funded from seed and angel investments, including from the Henley Business Angels, saw the company progress from a c. 100 sq ft office to a 1,500 sq ft office. After attracting significant investment in 2010, the company grew quickly again into a 4,000 sq ft office at the Enterprise Centre. Within just 18 months, MediaSift took a space double that size, progressively expanding it to around 12,000 sq ft. MediaSift now has international offices in the US and has left the Enterprise Centre for their own facilities in Reading.

- 6.14 The Henley Business School is, again, an important driver of enterprise activities through its Business Incubator and Henley Business Angels (HBA), which leverages its world-leading alumni network for the benefit of the TVB economy.

Successful Graduate Enterprise: Tim Brownstone, founder and CEO of KYMIRA

KYMIRA is a start-up business founded by Tim Brownstone in 2013, operating in the health and fitness market. The company develops wearable platform technologies, including energy harvesting technology and e-textiles primarily for use in the medical and domestic healthcare markets. The business operates from Henley Start-Up Business Incubator at the Science Technology Centre.

The business closed its pre-seed funding round of £121k in 2017, led by several members of the Henley Business Angels, with participation of existing investors. Tim Brownstone stated that Henley Business Angels was the only network that they chose to approach during the pre-seed funding round due to finding the smart money and expertise they required immediately. This funding will be used to progress the KYMIRA's research into smart wearable technology to monitor health and to expand the business further in new and existing markets.

The business has received £179,000 investment to date, won 8 awards and sells internationally across 27 countries.

- 6.15 Building on the success of The Science and Technology Centre and the Enterprise Centre, the University has been working with Thames Valley Berkshire LEP to bring forward the Thames Valley Science Park (TVSP) in Shinfield. TVSP is built upon the principle of enabling collaboration with businesses through co-location. It represents a major opportunity to bring together SMEs, large businesses, private researchers, and academic researchers together in a cluster. It will play an important role in broadening research linkages in the TVB area.
- 6.16 The TVSP has received investment of approximately £35m from reinvested university resources, in addition to receiving £5m in ERDF funding. The first section of the site opened in early 2018 and offers 70,000 sq. ft of office and lab space for approximately 20 technology-led businesses, ranging from start-ups to global R&D centres. The building is fully let and indeed it was fully let prior to opening. New TVSP tenants include:
- **3D Rapid Print** – a 3D printing start-up, occupying 750 sq. ft. on the TVSP and providing 1-5 jobs.

- **Ken Pye Associates Ltd (KPAL)** – an independent UK-based geology consultancy, occupying 500 sq. ft. in the Gateway Building on the TVSP. The company offers a range of survey, analysis, research and investigation services.
- **Proton Partners International** – a new relationship formed with the University as part of a national bid. This company’s oncology centres in the UK provide innovative cancer treatment and care to patients and has a network of research partners that work collaboratively to broaden the research effort in cancer care.
- **Total Analytical** – an independent mass spectrometry service organisation that works in the maintenance, training and resale of scientific instruments. It occupies 350 sq. ft. on the TVSP.

6.17 The TVSP already supports a large number of jobs and economic activity. As of 2018, companies located on the Shinfield campus had an estimated **280 gross direct jobs, supporting an associated £28m in direct GVA per annum. This rises to 540 jobs and £55m GVA per annum for the UK once indirect and induced multipliers are added.** The second building on the site (an innovative cancer treatment centre) opened in late 2018. In total, the TVSP aims to deliver a total of c. **800,000 sq. ft.** of flexible office and lab space, expected to host **up to 5,000 new gross direct jobs.**

6.18 From our consultations, it is evident that partners see the TVSP as a major, critical aspect of the University’s offer and contribution to the Thames Valley. It is a strategic intervention by the University in the economic development of Reading and TVB, providing the space to attract world-leading companies in innovative, productive and growing sectors such as life science, with long term benefits in terms of skills that jobs supported can attract and retain. Its added value sits within its role in expanding the area’s capacity to attract and retain globally mobile, knowledge-intensive businesses and to join them up with academics. This role is exemplified well in the example below where TVSP successfully secured Menarini Biotech as a major tenant.

The Thames Valley Science Park is a key innovation initiative for the area. It has already attracted globally mobile investment, and is expected to host up to 5,000 gross direct jobs once fully occupied

6.19 TVSP offers much more than just commercial space. The **Innovation Catalyst**, which is drawn out as another example outlined below where the TVSP is clearly supporting the local economy. The Innovation Catalyst encourages collaboration and co-working among innovation and knowledge-based entrepreneurial businesses.

Attracting world-leading firms: Menarini Biotech

The Menarini Group is an Italian pharmaceutical group of companies. In 2018, the TVSP was successful in attracting one of its subsidiaries, Menarini Biotech s.r.l. Menarini Group is Europe’s fastest growing private, bio-pharmaceutical business and employs over 17,000 people. A few years ago, Menarini embarked on a research programme for gene therapy technologies. This resulted in products currently in clinical trials and the need to establish a new R&D base.

Menarini undertook a global search for a location. Deciding to locate it in the UK, Menarini looked into a number of factors, including the UK’s research eco-system, international transport links and life sciences clusters. Ultimately, it chose the TVSP with close links to Heathrow, a strong life sciences base in the region and the ambition of the University for the future of the TVSP.

Menarini has taken around 3,500 sq. ft. of space at the TVSP, after locating a small office in the Enterprise Centre as a UK until the TVSP was open. This space includes 3 large labs to support research, product development, and obtain regulatory approval for their candidate products. It is anticipated that Menarini will expand at the TVSP, due to this being part of their motivation for locating at the site.

Building Innovation: Innovation Catalyst

The Innovation Catalyst is a co-working space at TVSP that promotes collaboration and networking. It is forged out of a partnership between VitalSix, Thames Valley Science Park, Henley Business School and Barclays' Eagle Labs. There are over 60 desks available at the space in its current guise and KTC staff are embedded within the Innovation Catalyst.

The space is targeted at businesses with new ideas looking to scale up their ideas and further the growth of their business. The Innovation Catalyst is built on the principle of knowledge sharing and networking, borne out by the open plan office space on offer.

It is focused on building a community of innovative businesses, sharing innovation, bringing sources of funding together and providing workshops, briefings and other forms of business support. Partners provide different services, VitalSix brings large corporates and small innovative firms together to quickly scale up companies with fast ideas, whilst Barclays' Eagle Lab Flight provides an accelerator programme for potential high-growth businesses including dedicated mentoring, workshops, masterclasses and investment preparation.

7. The University's international role

The policy context

- 7.1 The UK is an open, international economy: the world's second biggest exporter of services, and one of the foremost recipients of Foreign Direct Investment (FDI). The HE sector is itself highly internationalised. It is the second most popular destination in the world for international students, 30% of academics are from overseas and over half of its publications have an international author.
- 7.2 In the context of Brexit, the UK Government has stated the importance of this continued international openness, under the banner of "Global Britain." The Industrial Strategy specifically references the importance of flows of talent and international collaboration in research and innovation. The Government has also recently launched an international trade strategy to grow exports to 35% of GDP.
- 7.3 International connectivity is of particularly high importance to Reading and the Thames Valley Berkshire area, given the preponderance of multinationals, and the importance of FDI and exports to the local economy. The Reading 2050 Vision explicitly prioritises the development of global networks.

The University's role and performance

- 7.4 In this context, the University is a very important asset for the region, with global reach. Indeed, global engagement is one of three main themes within the University's 2026 vision:
- The UoR has 6,200 international students from 140 countries, representing 27% of all students at the Reading campus (this is well in excess of the sector average of 20%). As we saw in Section 5, these students bring significant expenditure to Reading.
 - It leads global research in partnership with organisations around the world. 20% of research grants and contract income come from international sources. As just one example, Reading Professor Chuks Okereke is working with African governments, policymakers, and NGOs to develop policies that enable African economies to grow without resorting to polluting methods of the past. Another example is the University's leading role in winning access to the EU food innovation project, EIT Food, worth approximately £340 million, to transform the food ecosystem, to halve overall food waste and to improve diets in Europe by 2030, building on the University's specialism in food, nutrition, and health. Across Europe, this partnership involves businesses, research centres, universities and consumers.
 - It has a network of campuses and sites, as well as a broad range of teaching and research partnerships around the world¹¹.
 - The Henley Business School alone operates in 17 countries through affiliate campuses or full local campuses. Henley Business School's international operations includes Denmark, Dubai, Estonia, Finland, Germany, Hong Kong, India, Ireland,

Given the aspirations for 'Global Britain' and the critical importance of connectivity for the Thames Valley, the University is a very important asset for the region with international reach.

¹¹ See <http://www.reading.ac.uk/about/global> for further details.

Malaysia, Malta, Singapore, South Africa, and Sweden. We discuss the benefits of the University's international campuses and sites in more detail below. In South Africa, Henley Business School received the highest rank of all business schools in Africa in the 2018 Financial Times Executive Education rankings.

- 7.5 International campuses and sites serve both to benefit the host locations (e.g. by providing employment, skills development, knowledge exchange) and to generate benefits for Reading and the UK (export earnings, international networks, enhanced brand profile for Reading, soft power, research partnerships, cultural change opportunities and inward investment).

NUIST-University of Reading Academy

- 7.6 The University of Reading and the Nanjing University of Information Science and Technology (NUIST) have a historical relationship. Initially, the partnership focused on research collaborations, particularly around meteorology, for which NUIST is the leading University in China. Faculty-to-faculty work between the two institutions has taken place for over a decade. The long-established partnership grew over time, with the establishment of the NUIST-University of Reading Academy in 2015.
- 7.7 The ambition of establishing the Academy was, and remains, to deepen and broaden the teaching base and research collaboration with NUIST, whilst increasing the global presence and reach of the University of Reading.
- 7.8 The Academy is a University campus in Nanjing. It offers a range of dual award programmes, taught in English, that enable students to study three years of their degree programme in China and then to complete their final year at the University of Reading's campuses in the UK. As of 2017, the Academy recruited up to 260 students annually in science and social science degrees.
- 7.9 The two universities are expanding their educational offer at the Academy to include postgraduate studies. By 2020, **over one thousand Chinese students will be able to study towards a University of Reading degree at the Academy**, increasing the intake to around 300 students per annum. As of 2018/19, NUIST will offer six-degree programmes.
- 7.10 A range of benefits emanate from this partnership both for Reading and the UK, as well as Nanjing and China. The benefits for Reading and the UK include:
- **Strengthening research collaborations and knowledge exchange**, providing world-leading expertise. For example, both universities excel in atmospheric sciences and this collaboration provides for world-leading research in the field. Research connections between the two universities include Professor Yan Ma, who studied at the University of Reading from 2002-2008, going on to lecture at NUIST, before becoming the Executive Dean of the NUIST-University of Reading Academy.
 - **Attracting expertise to the University of Reading** and the UK. In total, Reading has hosted 5 visiting academics resulting from this partnership to date.
 - **Export income** arising from international students paying fees to attend the Academy
 - **Attracting students to the University of Reading** with wider benefits, including their associated expenditure in the local economy whilst present, as part of their year in Reading on the programme or any study after its conclusion such as a Master's degree
 - **Cultural exchange for the students and staff** able to study and visit the Academy. A number of students have taken this opportunity and Dr Daguo Li, Director of China

Partnerships at Reading and Deputy Dean of the Academy said of the benefits for these students: “Ultimately, it is not until you develop an understanding beyond your current national or cultural boundary that you are able to appreciate the magnitude of global issues.”

- **The promotion of Reading internationally.** This international activity increases the visibility and attractiveness of Reading on the world stage, encouraging academically gifted staff and students to investigate the University of Reading in the UK as a place of study and academic activity
- **Increasing the soft power of the UK** in one of the fastest growing economies in the world by affording skills and expertise to future professionals who will have an affinity for the University, Reading and the UK having studied there.

8. Social and cultural contribution

The policy context

- 8.1 Alongside their economic value, national policy and the civic agenda also emphasises universities' social roles. The social value of universities is multi-faceted. It covers their role in driving social mobility, providing community access to facilities, and co-designing solutions with the communities on whom they have most impact.
- 8.2 Widening access to higher education has been a goal of successive UK governments, in recognition of HE as a driver of social mobility. This has stayed firmly on the agenda with the narrative that has developed on places and communities that have been left behind¹² and with evidence that social mobility has been slowing.¹³ The OfS aims to increase entry rates of students from under-represented groups, and to enhance their rates of progression.¹⁴
- 8.3 The era of austerity has seen the importance of anchor institutions increase greatly as the public sector looks to its partners to help deliver local services, including cultural facilities. Due to local authority austerity, many councils around the UK have made deep cuts to cultural and civic facilities, as they prioritise frontline services such as health and social care. Reading Borough Council is no exception, having had to make cuts of nearly £58 million since 2010 and a predicted £43.2 million shortfall in funding by 2020/21.
- 8.4 Although Reading is in many respects a very successful and prosperous economy, it nonetheless contains pockets of deprivation and social exclusion. These are acknowledged within the 2050 vision for Reading, which highlights the fact that two wards in Reading are in the 10% most deprived in England, with the attendant issues of poor health and poor education. Around 8,700 children in Reading (c 25% of all children) are living in poverty, with around 1,150 of those children living in Whitley, according to research by the national End Child Poverty charity in early 2018¹⁵.

The era of austerity has seen the importance of anchor institutions increase greatly as the public sector looks to its partners to help deliver local services

The University's role and performance

Widening participation

- 8.5 The University of Reading is strongly committed to widening participation (WP) and sees a strategic, whole-institution approach to doing so. Given the University's catchment area, its WP activity focuses on a 90-minute drivetime catchment from its Whiteknights Campus. This includes as far afield as West London, Southampton, and Bristol.

¹² The Rt Hon Justine Greening MP (2017), *Justine Greening: our ambition is to leave no community behind*, 14th December, 2017, Reform social mobility conference.

¹³ Social Mobility Commission (2017) *Social mobility policies between 1997 and 2017: Time for change*

¹⁴ The Office for Students (2018). *Regulatory Notice 1: Access and participation plan guidance for 2019-20*

¹⁵ End Child Poverty (2018) *Poverty in your area 2018*

- 8.6 These efforts include three areas of activity (recruitment and outreach, success, and progression), orientated towards different groups based on historic performance of the University. The University on access and retention of underrepresented groups, including on **The Reading Bursary Scheme, Targeted Fee waivers, a refugee bursary and Outreach**. Outreach work is specifically targeted at students from low participation neighbourhoods. In other places where schools and colleges are targeted, the demography of the student population there is broadly in line with the access targets. A very good example of the University's investment in outreach in a key local community is its work in Whitley:

Working with the Community in Whitley

The University has a specific, local objective to create deep-rooted relationships between the University and the community of Whitley, which has an extremely low level of higher education participation.

This relationship has developed over a number of years. Projects supporting the community in Whitley include:

- Partnership with the **Whitley Excellence Cluster** of Primary and Secondary Schools and the Aspire2 Charity. This directly supports children at schools in Whitley to raise educational aspirations. There is a focus on outdoor learning, exposing children and their families to university (including through a University of Whitley taster day) and a Students in Schools scheme where University students volunteer to go to challenging schools—often with similar backgrounds as their own—to raise aspirations.
- Running the **Marvellous Mums Project**, which empowers one of the key influencers in young people's lives in Whitley—their mothers. Building on findings that some mums lack the knowledge or confidence to inspire and motivate children to fulfil their full potential, the programme facilitates a support group and the support the mums themselves feel they need to motivate their children.
- Undertaking a wealth of research activity that is helping to alleviate challenges in the Whitley area. This includes the **Whitley Researchers Programme**, a partnership to ensure the issues facing local people are heard and research is used to find practical answers, such as improving local bus routes and tackling financial exclusion. Local residents received training in research methods and defined their own research questions. They have been supported by over 20 undergraduates, interns and PhD students from the University of Reading since 2014, with a strong learning opportunity for the students too. In 2017, the findings published around financial exclusion from this work was used to secure £1.3 million in local funding to create a community hub to make it easier for residents to apply for jobs.

- 8.7 Over the last 5 years, the University of Reading has made positive progress in increasing the proportion of entrants belonging to one or more groups that are under-represented in HE from 58% to 62%.

Charitable and Volunteering Work

- 8.8 Staff and students at the University are involved in voluntary work with the community, and there are some compelling examples of impactful work in this area, which include:

- Establishing a scholarship scheme for refugees in 2018, in partnership with Reading Refugee Support Group (RRSG) and Reading University Students' Union (RUSU). In 2017, the University supported Reading's bid to become a City of Sanctuary to bring together organisations, businesses and communities in the city and take practical steps to encourage hospitality for those who come to Reading after fleeing violence and persecution. The RSSG will be offering support with the application process to prospective refugee students.

- Reading University Student Union (RUSU) provided volunteering opportunities with 12 organisations during the academic year 2015/16, including primary schools, one secondary school, a care home and a soup kitchen. This includes the University of Monsters programme, outlined below in more detail. In total, 296 student volunteers have been involved in these opportunities, in addition to a further 124 one-off volunteers, providing approximately 4,700 hours of student volunteering overall.

Students Volunteering: University of Monsters

University of Monsters is a RUSU programme that aims to promote access to higher education, through engaging with school students from an early age to raise aspirations. The programme introduces local school pupils in years 5 and 6 to higher education, initially through sessions in their school and later with three visits to UoR's campus to explore what life and studying is like at University.

The programme is designed and delivered by RUSU and funded by their donors. Through involving student volunteers at the heart of the project, the school pupils are able to receive honest insights into University life from a variety of students from different backgrounds, studying different courses. The project aims to widen access to higher education among those who may not consider University as an option, through raising awareness of the diverse entry routes and courses available and provide information that can help them plan for the future. The programme concluded its pilot in 2016, and due to its success has received further funding to invite more schools to the campus in future academic years.

Culture

- 8.9 The University is a very active part of the cultural ecosystem in Reading, for example, through its membership of the Reading Cultural Partnership, from which the Reading Year of Culture 2016 project emanated. The Year of Culture project was staged throughout 2016 and involved a different theme each month of the year to showcase Reading as a cultural destination. The programme involved a number of grassroots arts organisations and partnerships to organise events throughout the year, working with Reading Borough Council.
- 8.10 The success of the Year of Culture 2016 gave way to the now annual Reading-on-Thames Festival, which is organised by the Reading UK CIC, of which the UoR is a key member. The Festival is a week-long festival which is supported by a wide range of partners including Arts Council England, the University and other stakeholders. Other important cultural contributions from the University include:
- The Reading Gaol project. Reading Gaol was operated as HM Prison Reading until 2013. A Grade II listed building opened in 1844, it became an arts venue for the Reading 2016 Year of Culture. It remains available for tours run by the National Trust, and plans are afoot to turn it into a permanent arts and culture venue.
 - As part of the Cultural Partnership's work to enhance Reading's identity, the University supported the independent theatre company 'Reading Between the Lines' to develop a Made in Reading brand, which is used by local cultural organisations to promote original local work.
 - Investing in capacity, for example, the creation of two new staff roles that are dedicated to developing better links with the creative industries—particularly in film, theatre, and television. The University is leading Reading International, which is a project funded by the Arts Council England to improve visual arts provision in and around Reading by attracting international artists to come and work with local arts organisations.

8.11 Reading Film Theatre located on the University of Reading's Whiteknights Campus is the only independent, arthouse cinema in Reading. It is over 50 years old hosting a range of smaller budget, arthouse and foreign language films. The University also houses the Minghella Studios on its Whiteknights Campus, which includes theatres and production facilities, fostering a vibrant, student theatre scene which often involves performances open to the local public.

The Museum of English Rural Life is the only one in Reading to have achieved National Portfolio Organisation Status

8.12 UoR is home to a number of museums including the Cole Museum of Zoology, the Ure Museum of Greek Archeology, and the Becket Collection. These museums are open to the public and academia, offering insights into Reading's collections and expertise in these areas to the community. A real stand-out cultural success story for the University has been the Museum of English Rural Life – see below.

The Museum of English Rural Life (MERL)

MERL hosts the largest historical collection in the UK related to the countryside, food and farming. It is part of the University of Reading and is located there.

MERL has had great success in achieving National Portfolio Organisation (NPO) status. NPOs receive investment from a specific pot of funding held by the Arts Council England. This was achieved in part because of the Museum's strong collaborative working with Reading Museum, and the two museums are listed together on the National Portfolio as the MERL and Reading Museum Partnership. **This partnership is the only NPO in Reading.**

On top of this, MERL has historically been successful in attracting Heritage Lottery Funding, with total investment now at around £8 million. A £1.8 million grant included in that total amount allowed for the comprehensive redevelopment of the Museum, including the construction of nine new galleries and other new facilities, allowing the Museum to display over a million items to ever increasing numbers of visitors.

MERL is highly involved in community engagement. A recent independent evaluation report argues that the work and targeted reach through community organisations was particularly innovative and successful. In 2017, 750 school participants, 453 young people and 3,264 people were engaged.

8.13 In 2015/16, approximately 7,500 people attended free public lectures at UoR, the 6th highest figure of 19 universities in the South East. Additionally, the University had approximately 3,500 attendees at performance arts events, 28,600 at exhibitions and 2,200 at museum education events. The University ranks 22nd in the UK based on number of attendees at chargeable museum education events.¹⁶

Civic and community engagement

8.14 The University collaborates with a number of public sector partners including the Thames Valley Berkshire LEP and the Berkshire Healthcare NHS Foundation Trust:

- **TVB LEP.** The University is represented on the TVB LEP Executive, the decision-making body of the LEP, by the University's Chief Financial Officer, who is the Higher Education Lead on TVB LEP.
- **Reading UK CIC.** The University is involved in the Reading UK CIC, which took on the economic development functions of Reading Borough Council in response to local government austerity. It is now funded by its members, which includes the

¹⁶ Source: HE-BCI survey, 2015/16

University. As part of its involvement in the CIC, the University played a leading role in developing the Reading 2050 vision.

- **Berkshire Healthcare NHS Foundation Trust.** The University's partnership work here involves hosting some of their key healthcare services on the Science and Technology Centre on the Whiteknights Campus. This involves co-locating a number of research and academic functions, as well as delivering services such as the Anxiety and Depression in Young People Centre, the Thames Valley Clinical Trial Unit and joint clinics.
- 8.15 Another notable example of a strategic local partnerships is the major partnership with the British Museum was launched in late 2017 to develop the British Museum Archaeological Research Collection (BM_ARC). This is a significant new collection storage and research society that will be housed in a new facility in Wokingham Borough.
- 8.16 The University has made clear its desire to be a good neighbour to local residents through its Community Relations and Engagement Strategy. The University is highly conscious of its need to manage its externalities (such as the impact on local residents of student behaviour).
- 8.17 Following complaints from local residents, particularly around the behaviour of some students, **the University has analysed the possible reasons behind poor behaviour and taken steps to mitigate the impact.** For example, it has implemented a street support team to target and improve student behaviour, as well as aiming to promote integration between students and local communities. This includes a focus on late night socialising and reducing the impact on local residents. This new scheme was launched in April 2018 and provides a highly trained team to work in residential streets around the campus between 10pm and 4am several nights a week, offering advice to students and encouraging them to be respectful and safe when travelling through these areas late at night.
- 8.18 The University's campus includes **lakes, conservation meadows and woodlands, which are open to the public.** The campus parkland is enjoyed by local people, though specific data is not available on use as it is free to use. The University's SportsPark is also open for the use of local people; its facilities include squash courts, tennis courts, synthetic turf pitches, a sports hall and a number of dance and fitness studios. In 2017, the University of Reading's Whiteknights campus was recognised as one of the country's top green spaces, receiving a Green flag award for the seventh consecutive year. In total, 1,797 UK parks and green spaces have been recognised for their quality, and the Whiteknights campus ranked within the highest scoring tier of these.
- 8.19 The University has also **contributed to public infrastructure.** For example, the University of Reading delivered the Shinfield Eastern Relief Road as part of its Thames Valley Science Park development in 2017. This not only unlocked the land for the Science Park, but also unlocked a significant area for housing development within the Shinfield Parish area – a scheme which overall aims to deliver 3,000 new homes. There have been numerous improvements to sustainable transport that also benefits the community, such as the timetable changes to the number 21 claret bus route, to improve reliability of one of the most popular routes in Reading that serves the Whiteknights campus and Earley areas of Reading and investment in the interiors of the 21a service, which links the Whiteknights campus and the town centre. The University has also played a role in extending the ReadyBike rental bike scheme, hosting a number of the docking stations on its campus for the public and its students to use. In terms of placemaking, the University is currently undergoing its 2026 Transform programme, which aims to invest in its campus to provide first-class facilities.

9. Conclusions and next steps

Summary of our findings

- 9.1 Our report provides a robust quantitative and qualitative assessment of what has intuitively always been known to be the case. The University of Reading is an important, positive anchor for Reading and Thames Valley Berkshire (TVB). It makes a distinctive contribution to 'Global Britain'. However, the report, unlike traditional impact analyses, seeks to do more than this. It helps to provide a baseline and perspectives from which policy choices may be made, by both the University, local and regional partners, about the directions of travel in the 2020s and beyond. Our concluding chapter pulls these arguments together and presents them for future development by the University and partners.
- 9.2 The core metrics show an institution of £290m per annum turnover, directly employing 3,400 FTEs to deliver a mid-size, full service University of approximately 16,000 student enrolments, major research excellence, and a range of third mission activities. The University is typically in the top quartile of UK university ranking tables, and within the top 250 globally. With more than a quarter of students coming from overseas, multiple international sites and affiliates, the University has genuine global reach. Put together, our model suggests the University generates at least £800m in GVA and 11,550 FTE jobs for the UK economy, of which around 55% accrues to Thames Valley Berkshire.
- 9.3 The University of Reading's impact can be shown to be significant in supporting and growing TVB's assets and capabilities in all the ways one would expect:
- Graduates provide an important part of the higher skilled labour force for the area with over 20% staying locally, and most contributing to the future growth of London and the South East. The University is a major supplier and supporter of CPD for both business and key public services like schools, health and care.
 - Business productivity is positively impacted by knowledge exchange activity, particularly for the numerous businesses located on the University estate at Whiteknights and TVSP. 98% of the University's research is internationally-recognised, with 27% ranked world-leading. The Innovation South Science and Innovation Audit's highlighting of the University's food, health, environmental, data science and modelling strengths provide a strong platform for future developments.
 - The University of Reading's arts and culture infrastructure and services make a large, distinctive contribution to Reading and the sub-region's quality of life. The University takes its civic responsibilities seriously - engaging in housing, transport and community developments in Reading as a whole, and Whitley in particular.
- 9.4 Beyond these sources of impact, the University has led and championed several 'game-changers' for Reading and TVB.
- The assimilation of **Henley Business School** retained a global business school brand for TVB, as well as transforming the University's capabilities to support business growth and executive development in the region.
 - The establishment and operation of **Thames Valley Science Park** on the M4 corridor provides TVB with the potential to grow future clusters of high technology, high value activity in a key UK strategic location.
 - The **Museum of English Rural Life (MERL)** is one of Reading's premier cultural visitor attractions, and its success as Reading's first National Portfolio Organisation (NPO) provides a foundation on which the town's relative arts and culture cold-spots can be redressed.

- **The University's research excellence**, attracting centres such as the European Centre for Medium-Range Weather Forecasting (ECMRWF), puts the University and the region at the forefront of tackling key societal and environmental challenges globally and locally.

9.5 Alongside generic and transformational impacts, the University demonstrates positive **leadership** credentials in exercises like Reading 2050; **partnership** working with the LEP and many other business, public and community institutions; and **citizenship** responsibilities in, for instance, its extensive involvement with the Whitley area and community.

The University's future civic role

9.6 Our analysis has shown that the University has already been engaged in civic activities across the range of domains: economic, social and cultural.

9.7 One of the key choices facing the University is how far it wishes to shape and present these activities and impacts as part of a coherent civic agenda, rather than as a portfolio of individual interventions. Our exercise found the civic architecture of the University relatively underdeveloped compared to comparator universities with longstanding civic missions and purposes. Its local and regional role is not always articulated within its published strategies, and the array of regional activities, interventions and interactions in which it is involved are generally not centrally managed, monitored or evaluated.

9.8 Hence, as the University refreshes its strategies, the institution might wish to establish with greater clarity than hitherto its local and regional ambitions and values; structures and processes internally (including a senior responsible officer) for driving, embedding and business planning those priorities; and systems for performance managing and evaluating progress.

9.9 The University's partnership working suggests this type of approach would include a more consistent approach to involvement of partners and beneficiaries in the selection, prioritisation, co-design, and co-production of the University's most effective local and regional interventions.

9.10 Locally, it might also suggest further work to anticipate and mitigate externalities (building on the existing response to community feedback on students' behaviour); increased social responsibility to communities most impacted by University of Reading activity; more locally targeted WP initiatives to reduce polarisation of progression and participation in Reading and TVB; and more expansive community access to the campuses and services of the University.

9.11 What is particularly exciting about this type of evolution of 'civic architecture' is how far it resonates with, and can add value to, wider University challenges in a very demanding period for universities.

9.12 The scale and scope of our study did not allow us to investigate this fully. But there are some major illustrations of big-ticket TVB changes raised during our fieldwork to which the University would naturally contribute, and which, done well, might greatly enhance its own progress as an institution:

- Having played a major role in the Reading 2050 vision, the case for the University to support the borough's transition to being recognised as a major city (of Green Technology, Culture & Heritage, Rivers and Parks), and to lead on components of this, is compelling. The move to unequivocal status as a vibrant, contemporary city would undoubtedly assist its student recruitment, and to provide furthermore the thematic 'living laboratories' to develop the University's research excellence and relevance further.

- Related to Reading's city status, but of TVB significance, would be further elaboration of the concept of a relocation of Royal Berkshire Hospital supported by a University of Reading Medical School as a key anchor for modernising TVB's health and care systems to meet the grand societal challenges of healthy aging.
 - On this theme, the challenge of an aging population will be felt strongly in Reading, as elsewhere in the UK. The latest projections see the number of residents aged 65 years and above growing by over 50% in the Borough up to 2040 (compared to 44% in England), against growth in the working age population of only 4%. Long term graduate retention in TVB will remain a challenge given the gravitational pull of the nearby London labour market. However, with over 3,000 undergraduate qualifiers per year at UoR, the vast majority from outside the borough and around 20% staying locally after graduation, there is an opportunity to work with the Borough and employers to increase long term graduate retention and thus provide a net boost to the number of working age residents year on year. Moves within HESA to measure graduate outcomes over a slightly longer period will help in understanding the movements of UoR graduates and UoR could look to build on this with partners.
 - Looking at TVB more critically, the case for radical transformation in the face of Industry 4.0, perhaps Industry 5.0, and Brexit, will clearly be acutely and distinctively played out in TVB's currently successful, but particularly internationally-dependent, economy. The need, and potential, for the University to offer the business economy something distinctive and highly accessible in the face of strong adjacent alternatives in Oxford and London is important and relevant to both the institution and for TVB more widely. In this respect, the University of Reading's global reach through its international students, sites and affiliates should be leveraged more for Reading and TVB as well as 'global Britain' dividends.
 - Finally, within the realm of blue sky thinking—as large as the University of Reading is in the TVB economy—we wonder whether strategically TVB has an opportunity to grow its HE presence further over the medium to long term. Intuitively, one would expect the most successful non-metropolitan LEP area in England to have higher rather than lower HE densities than average. But TVB does appear to have contra-indicators in this regard. For instance, adjacent Oxfordshire has a University enrolment of over 40,000 for a 682,000 population (1:17). TVB, on the other hand has an enrolment of 15,000 for a population of 900,000 (1:60). Of course, proximity to the Golden Triangle of Oxford, Cambridge and London universities plays a role here, but further understanding of these differentials could generate significant opportunities, to which TVB and the University of Reading could respond.
- 9.13 To reiterate, these are not the only forward-looking ideas that were raised with us during the study, nor have we appraised any of them at any level of detail. What they do demonstrate, though, is that there is an impressive foundation of important issues on which a win-win civic agenda could be crafted, if the University, Reading and TVB have the commitment to such a process.
- 9.14 In the meantime, we consider this report provides a solid quantitative and qualitative baseline of the University of Reading's position in terms of economic and social contributions locally, regionally and nationally. This chapter supplements that baseline with suggestions on the institutional architecture and strategic agendas that could move current performance forward purposefully.
- 9.15 With the University recruiting a new Vice Chancellor, we consider this is an opportune moment to consider and discuss this report with Council, Academic Boards internally, and with partners externally, to determine how and which elements of the civic agendas that they might wish to prioritise for the 2020s.



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